

BEFORE THE
ENERGY REGULATORY COMMISSION OF KENTUCKY

IN THE MATTER OF

GENERAL ADJUSTMENTS IN
ELECTRIC RATES OF
KENTUCKY POWER COMPANY

CASE NO. 7900

TESTIMONY

OF

FRANK J. HANLEY
ASSOCIATED UTILITY SERVICES, INC.

KENTUCKY POWER COMPANY
RETAIL ELECTRIC RATES

Direct Testimony

of

Frank J. Hanley, Senior Vice President
Associated Utility Service, Inc.

Concerning

Fair Rate of Return

1 Q. Please state your name, occupation and business address.

2 A. My name is Frank J. Hanley and I am a Senior Vice President of Associated
3 Utility Services, Inc. My business address is P. O. Box 650, 155 Gaither
4 Drive, Moorestown, NJ 08057.

5 Q. Have you prepared a summary of your educational background and professional
6 experience?

7 A. Yes, and that information is set forth in Appendix A supplementing this
8 testimony.

9 Q. What is the purpose of your testimony in this case?

10 A. My assignment has been to prepare a study of the cost of capital and fair
11 rate of return which Kentucky Power Company (the Company) should be af-
12 forded an opportunity to earn during the near-term future and to testify
13 to the findings of that study.

14 Q. Have you summarized the results of your cost of capital and fair rate of
15 return study?

16 A. Yes, and it is shown on Schedule 1 which consists of 2 pages. As can be seen,
17 I use the weighted cost of capital approach. I observed the actual capital
18 structure ratios and fixed capital cost rates of the Company at the end of
19 the historical test period March 31, 1980. Since no permanent financing is
20 expected to occur between March 31, 1980 and the end of the calendar year
21 1980 or at December 31, 1980, the capital structure ratios at March 31, 1980
22 are the most representative of how the Company will be financed on a permanent
23 basis in the near term future. However, the Company must still maintain its
24 current bond rating and improve its coverage ratios in anticipation of long
25 term debt which will be necessary to be issued in 1981.

26 The cost rates for fixed capital can be readily calculated. However,
27 the cost rate for common equity capital must be a matter of expert informed
28 judgment, since there can be no contractual agreement for return thereon.

1 Since regulation is a substitute for the competition of the marketplace,
2 analysis of marketplace transactions is the most meaningful measure of
3 common equity cost rate.

4 In arriving at my conclusion of cost rate for common equity capital,
5 I took into account a number of methodologies rather than rely exclusively
6 upon a single methodology. On Schedule 1, I have my overall cost of capital
7 and fair rate of return determination.

8 The principal market based methodologies employed to determine the
9 cost of common equity were earnings/price ratios and earnings/net pro-
10 ceeds ratios. I studied these with a view of establishing trends as opposed
11 to spot points in time or averaging periods of time analyzed. Also, I per-
12 formed analyses utilizing the discounted cash flow, capital asset pricing,
13 and bare rent methodologies. After arriving at my common equity cost rate
14 conclusion, I then utilized the comparable earnings methodology in a manner
15 which avoids circular reasoning and then performed an analysis of the indicated
16 coverage of fixed charges as a checking device.

17 As can be seen on page 1 of Schedule 1, my conclusion of a proper common
18 equity cost rate is 14.50% relative to a 41.15% common equity ratio. The capital
19 structure ratios shown include unamortized job development investment credits
20 as indicated in note 1. My overall cost of capital conclusion is 11.37% and
21 was based on capital structure ratios without regard to the job development
22 credits. The common equity ratio based on total capital without regard to the job
23 development credits is 43.10% as shown on page 1 of Schedule 2. Calculation of
24 the overall cost of capital first without regard to the job development credits
25 is necessary because those credits are to earn at a rate equal to the overall
26 cost of capital. If an "allocation" of the credits is made between debt and
27 equity, it is therefore implicit that the "allocated" debt portion results
28 in additional interest charges. In fact, the job development tax credits,

1 while they reduce income tax liability, do not generate any interest expense.
2 The overall cost of capital and fair rate of return, as summarized on page 1,
3 which I had given the Company, and upon which its filing was based, is 11.37%.

4 However, an order of this Commission on June 27, 1980 subsequently
5 necessitated refunds and a re-statement of financial data. The retained
6 earnings and the unamortized job development investment tax credits were
7 affected and resulted in slight changes in the capital structure ratios.

8 Following the procedures outlined above but using the restated figures
9 I have recalculated the overall cost of capital and fair rate of return to
10 be 11.35%. It is summarized on page 2 of Schedule 1. The details are set
11 forth on page 2 of Schedule 2.

12 It should be noted that an absolute change of 0.02% from a starting point
13 of 11.37% represents a de minimis percentage change in the overall cost of
14 capital of 18/100ths of one percent. To further indicate the de minimis
15 nature of such a change, a change of 0.02% in the overall cost of capital
16 is effected by a change of 1/20th of one percent in the common equity cost rate
17 with a common equity ratio in the 41% area. Theoretically, a slight decline
18 in the common equity ratio from 41.15% to 40.91% would require a de minimis
19 increase in the common equity cost rate to reflect the increased financial
20 risk. Frankly, no such degree of precision is possible in the determination
21 of a common equity cost rate which involves the exercise of expert informed
22 judgment. Thus, I do not believe that a revision in the revenue increase
23 requested in the filing is necessitated, from a rate of return standpoint.

24 I have summarized my studies in an Exhibit. It consists of 19 Schedules
25 and has been marked for identification as Kentucky Power Company Exhibit._____

26 Q. What general principles have you considered in your determination of the
27 cost of capital and fair rate of return?

1 A. In unregulated industries, competition in the marketplace is the principal
2 determinant in establishing the price of a product or service. In the case
3 of regulated public utilities where there is , for the most part, an absence
4 of such competition, regulation must act as a substitute for the competition
5 of the marketplace. Therefore, in my determination of a fair rate of return,
6 I have made every effort to evaluate data gathered from the marketplace for
7 similar-risk enterprises. In my opinion, a fair rate of return should never
8 be less than the overall cost of capital, including the embedded cost of
9 fixed capital, expected to be experienced during a reasonable period of time
10 in the future when any new service rates would be in effect.

11 It is essential that the cost of capital be earned if an enterprise is
12 to compete successfully with others in the capital markets on a reasonable
13 basis. However, the conclusion as to a fair rate of return must be the
14 result of informed judgment after consideration of the cost of capital and
15 other factors such as attrition and regulatory lag.

16 Q. Have you reviewed the Company's rate request and supporting exhibits filed
17 in this proceeding?

18 A. Yes, I have.

19 Q. Please explain the approach you employ in your determination of the cost of
20 capital and fair rate of return.

21 A. I rely principally on market-determined data for determining the cost rate
22 for common equity capital. I observe the past, present and near-term future.
23 The Company should be viewed as a going concern seeking capital in the market-
24 place on a reasonable basis commensurate with its business and financial risks.
25 Since new rates are always set to be in effect for a period of time in the
26 future, a reasonable opportunity, not a guarantee, should be afforded to earn
27 the cost of capital related to that prospective time period.

1 During that prospective period of time, as rate base increases over
2 that used in rate proceedings, the likelihood of achieving the allowed fair
3 rate of return diminishes. Other factors influenced by inflation are expense
4 and capital attrition. Combined with investment attrition, or rate base
5 growth, they erode the allowed fair rate of return.

6 Q. What capital structure ratios are the most appropriate for use in your cost
7 of capital and fair rate of return determination?

8 A. The actual capital structure ratios of the Company at the end of the test
9 period or March 31, 1980 are most indicative of the near-term future, the
10 period of time any new rates likely would be in effect. They are most
11 indicative of the near-term future because the Company has no plans to issue
12 any new permanent capital during the remainder of the calendar year 1980.
13 Consequently, the permanent ratios at March 31, 1980 are most indicative of
14 how the Company will be financed in the near-term future on a permanent basis.
15 The details of the capital structure and related ratios are shown on Schedule
16 2 both excluding and including the unamortized job development investment tax
17 credits. Page 1 contains data before, while page 2 contains data after, the
18 restatement resulting from the KERC Order of June 27, 1980. For the reasons
19 previously mentioned, I will continue to emphasize the ratios upon which the
20 requested overall rate of return was based, namely before the restatement.

21 The actual ratios at March 31, 1980 based on total investor provided
22 capital including short-term debt, were 54.27% long-term debt, 2.63% short-
23 term debt and 43.10% common equity capital as shown on page 1 of Schedule 2.
24 Similarly computed ratios at the same date but including the job development

1 investment tax credits were 51.81% long-term debt, 2.51% short-term debt,
2 4.53% job development credits and 41.15% common equity. These latter ratios
3 are the most representative and are the ones I will adopt in my overall cost
4 of capital and fair rate of return determination. Re-stated data are shown
5 on page 2.

6 Q. Have you analyzed financial data for the Company?

7 A. Yes. I have made such an analysis and it is shown on Schedule 3. I have
8 shown data for the years 1975-79 inclusive on page 1. Shown at the upper part
9 of page 1 is the actual capital employed. The actual capital structure ratios
10 based upon permanent capital as well as total capital employed are shown
11 below that. By 1979, the Company employed approximately \$353 million in
12 total investor provided capital including short-term debt which was about 43%
13 greater than the total capital employed in 1975.

14 The average achieved return on book common equity during the five year
15 period 1975-79 inclusive was only 10.9% and not much higher than the average
16 9.6% yield on public utility A rated bonds during the same period. Comparison
17 of this historical performance with electric utility barometer groups con-
18 firms the need for much higher achieved return rates on book common equity
19 which will also result in improved coverages of fixed charges.

20 There is a correlation between adequate achieved return rates on book
21 common equity and coverage of fixed charges, and market/book ratios. The
22 return rate on book common equity provides the margin by which fixed charges
23 are earned more than one time. Because achieved earnings rates on the book
24 equity of electric utilities have been too low, investors have been consistent
25 discounting the prices of the stocks to below book value. Because of

1 inadequate coverage levels, the rating agencies have downgraded the bond
2 ratings of many electric utilities in the last five or six years. Capital
3 structure ratios play an important role in bond ratings. However, many
4 other factors are also taken into account by the rating agencies which can
5 be collectively referred to as business risk.

6 Q. What do you mean by business risk?

7 A. Business risk is a collective term representing all of the risks of an
8 enterprise other than financial risk. There are many examples of business
9 risk, such as regulatory accounting/rate treatment, quality of management,
10 sales mix, prospective growth, etc. Clearly, the various types of energy
11 crises and high inflation rates in the last decade have increased the
12 business risk of utilities in the eyes of investors. It can be measured by
13 the volatility in pre-tax earnings. However, even when pre-tax earnings are
14 not very volatile but are consistently low, there is a high level of risk
15 unless one considers the assurance of continued deprivation of a fair rate
16 of return to be devoid of risk.

17 It is seen in Schedule 4 that the competitive position of utilities in
18 the money market is weak in contrast to unregulated enterprises as measured
19 by the Standard & Poor's 400 Industrials. While the market/book ratio of
20 the S&P 400 declined between 1975 and 1979, it ranged between 155% and 126%.
21 In other words, even in the lowest year, the integrity of the common stock-
22 holders' investment in the unregulated companies was not violated. This is
23 in direct contrast to the two barometer groups of electric utilities. The
24 Moody's 24 Utilities had a modest increase in the market/book ratio between
25 1975 and 1979 but in no year did the average market value equal or exceed

1 book value and in 1979 market prices were about 18% below book value. The
2 seven barometer electric companies managed to sell at book value in only
3 one year (1977) out of the five and in 1979 the average market/book ratio was
4 only 82.3%. As can also be seen, the S&P 400 Industrials experienced a
5 significant increase in earnings/book ratio during the period which was 17.4%
6 in 1979 or nearly 32% higher than in 1975. This performance reflected a
7 continually rising cost of capital. The utility barometer groups however
8 fared poorly in regard to earnings/book ratios as the Moody's 24 increased
9 by only 3.7% to 11.3% in 1979 and the seven barometer companies actually
10 experienced a decline of 3.4% to 11.5% in 1979. This poor performance of the
11 utilities i.e. their inability to achieve rising rates of earnings on book
12 common equity in the face of obviously higher money costs accounts for their
13 continued poor performance as measured by market/book ratios consistently
14 below 100%. Since there has been no change of substance in the degree of
15 financial risk for the barometer companies during the period, it seems clear
16 that the continued discounting of their stocks by investors to below book
17 value is largely attributable to significant increase in perceived business
18 risk.

19 Q. What is financial risk?

20 A. Financial risk is the additional risk that is induced by the use of financial
21 leverage, i.e., the employment of fixed capital in the capitalization.

22 Utilities used to be a much lesser business risk vis-a-vis unregulated
23 enterprises. They were then able to employ a greater degree of financial
24 leverage than did unregulated enterprises. However, in the last decade or so,
25 a relative increase in the business risk has occurred. Consequently, there
26 exists, in my opinion, an imbalance between investors' current and prospective

1 perception of business risk of utilities and the actual degree of financial
2 risk. It is my belief that investors still perceive utilities to be lesser
3 business risks in the absolute sense vis-a-vis unregulated enterprises.
4 However, I believe that the relative difference has narrowed. Since the
5 degree of financial risk is essentially the same, the total risk of investment
6 (i.e. the sum of business risks and financial risk) is greater than was
7 the case prior to the era of energy crises and double digit inflation.

8 Q. What debt cost rate will you adopt relative to your cost of capital determina-
9 tion?

10 A. I will adopt a long-term debt cost rate of 8.91% and a short-term debt cost
11 rate of 10.95%. These cost rates are summarized on page 1 of Schedule 5. In
12 my opinion these rates are reflective of the near-term future. Had I chosen
13 to use only actual cost rates at March 31, 1980, the short term debt cost rate
14 would be 21.35% instead of 10.95%. On page 2 of Schedule 5 the details of the
15 long-term debt cost rates to maturity are shown by issue.

16 Q. Why do you include recognition for premium, discount and other costs of
17 issuance in determining the embedded cost rates of long-term debt by issue?

18 A. The interest cost represents the greatest portion of the total cost of such
19 capital. However, there are other costs involved in connection with borrowing
20 such funds which are necessary. If such costs are not permitted to be
21 recovered via the long-term debt cost rate, recovery would be at the expense
22 of the common shareholders and the cost rate for common equity capital would
23 then be higher than otherwise. I have taken these expenses into account in
24 the development of the long-term debt cost rates by issue as shown on page 2
25 of Schedule 5.

1 Q. How did you arrive at a cost rate relative to common equity in your cost
2 of capital and fair rate of return determination?

3 A. In my opinion, a market-determined cost rate is the most significant indicator
4 in arriving at a cost rate for common equity when properly interpreted.
5 However, there is no single method through which a proper cost rate for common
6 equity capital can be precisely determined. I believe that proper cost rate
7 is the result of informed judgment after all possible criteria have been evalu-
8 ated.

9 The Company's stock is not publicly traded. I believe the best indicators
10 of common equity cost rate are available from analyses of marketplace trans-
11 actions. Therefore, I have chosen to also observe several groups of similar
12 risk operating electric companies whose stocks are publicly traded. Analyses
13 of such barometer groups aid in the determination of a proper common equity
14 cost rate by minimizing the probability of bias likely when market data for
15 only a single comparable company is observed. Thus, the barometer companies
16 provide valuable insight to investors' common equity cost rate requirements.

17 Q. What periods of time have you observed in your analyses of these barometer
18 groups of companies?

19 A. I have evaluated the data for all companies studied during the most recent
20 five calendar years for which data is available, i.e. 1975 through 1979,
21 inclusive. Also, on Schedule 12, on a much more limited basis, I have reviewed
22 the most recent interim 1980 data available. Data at any particular point
23 in time may be distorted for many reasons. For instance, the price of a
24 company's stock in one year may be higher than earnings in that year could
25 justify because of investor anticipation of prospective rate relief. After
26 rate relief, the price often declines as attrition erodes the level of earnings

1 allowed, to a level less than that which had been anticipated by investors.

2 In the final analysis, the cost of common equity must not be measured solely by
3 spot conditions. However, spot costs may be indicative of the future if
4 analysis of trends over a period of time confirms that such costs are likely to
5 remain in effect during the near-term future.

6 Q. What are some factors other than timing which affect the cost rate of common
7 equity capital?

8 A. Some other factors are size, common equity ratio and coverage.

9 Q. How do size and common equity ratio affect the cost rate of common equity
10 capital?

11 A. Larger companies generally tend to experience lower cost rates for capital
12 than do smaller companies. The principal reason is greater marketability, or
13 liquidity, for the securities of larger companies because of a greater degree
14 of investor recognition. Also, larger companies generally have a greater
15 dispersion of revenues, expenses and earnings which tends to make them less
16 susceptible to sudden dramatic changes in the economy of their own service
17 area.

18 Companies with lower common equity ratios generally experience a higher
19 cost of common equity capital than those with higher common equity ratios.
20 This is generally true because those with lower common equity ratios have
21 more creditor claimants (secured debt and preferred stockholders) on assets
22 and earnings ahead of them, thereby making the investment in common stock
23 more risky.

24 Q. How does coverage affect the cost rate of common equity capital?

25 A. Interest coverage is usually defined as the number of times annual interest
26 on debt has been earned. It is the multiple relationship between the income

1 available to pay interest charges divided by those charges. Earnings
2 available for common equity provide the margin by which fixed charges are
3 covered more than one time. Inadequate coverage usually stems from an
4 inadequate achieved rate of earnings on book common equity. Investors use
5 coverage as a tool to measure the relative safety of their investment and
6 as an indicator of the relative level of profitability. Coverage is measured
7 both before and after income taxes.

8 Before-income tax coverage requirements are found in most Trust Indentures.
9 Many institutional investors require achieved coverage of at least 2 1/2 times
10 before-income taxes before they will seriously consider making an investment
11 in a company in order to avoid the need for setting up a reserve fund. Con-
12 sequently, such a requirement is often a minimum to even warrant serious
13 consideration. Rating agencies, such as Moody's Investors Service and Standard
14 & Poor's Corporation, place great emphasis on coverage. Standard and Poor's
15 does not include Allowance for Funds Used During Construction (AFC) in cal-
16 culating coverage. In fact, many Trust Indentures limit the amount of AFC
17 earnings which can be considered in calculating coverage in order to determine
18 if new debt may be issued. The rating agencies have stated the importance of
19 before-income tax coverage because before-income tax coverage levels out the
20 financial risk differences between enterprises.

21 Coverage of preferred stock is usually measured by relating the after-
22 income tax income available for fixed charges to total fixed charges (the
23 sum of all interest charges plus preferred dividends).

24 Investors and rating agencies determine adequate coverage by observing
25 historical experience over a period of time such as five years and anticipated
26 trends in the future as opposed to relying on coverages during a single year
27 or two. Confirmation of the importance of trends is evident in that the

1 Securities and Exchange Commission in prospectuses requires that data be
2 shown for at least five years.

3 Q. Is coverage ever abused through incorrect comparison and/or interpretation?

4 A. Yes. An example of incorrect coverage comparison would be trying to compare
5 coverages, after income taxes, between companies with distinctly different
6 capital structure ratios and/or embedded cost rates of fixed capital. An
7 incorrect and misinformed interpretation would be the assumption that the
8 level of coverage required to attract new capital is somehow related to
9 provisions of Trust Indentures or Preferred Stock Agreements. Those pro-
10 visions are tests of protection for already existing fixed capital investors.
11 The level of coverage needed to attract new capital is much greater than the
12 minimum protection level for present investors. Such contractual tests
13 usually do not represent the coverage requirements of prospective investors
14 in the marketplace.

15 Q. What techniques have you considered in order to make a determination of cost
16 rate for common equity capital?

17 A. Since a contractual agreement cannot be made with common shareholders with
18 respect to cost rate, it is necessary to utilize expert informed judgment
19 which is well recognized in the regulatory process. In order to avoid the
20 pitfalls of relying exclusively upon a single method, I utilize a number of
21 methods in order to arrive at my conclusion of common equity cost rate.

22 The principal market-based methodologies I employ are applications
23 of earnings/price ratios and earnings/net proceeds ratios. I also utilize
24 market-based discounted cash flow or DCF analysis, the capital asset pricing
25 model (CAPM) and the bare rent theory. After arriving at my conclusion, I
26 then utilize the comparable earnings technique in a manner which avoids

1 circular reasoning. As an additional tool, in the form of a checking device
2 I also performed an analysis of the coverage of fixed charges. I do not rely
3 upon the use of averages or the specific data at a given point in time. Rather,
4 I utilize all of the data with the objective of determining a trend. Since
5 rate making is prospective, a common equity cost rate should be matched up
6 to a prospective period of time new rates are likely to be in effect, i.e.
7 between rate cases.

8 Q. Are earnings/price ratios an excellent indicator of the cost of common
9 equity?

10 A. Yes, although, they must always be adjusted to reflect the costs of issuance.
11 As with the use of any methodology, unwarranted emphasis should not be placed
12 upon conditions of a single year or a spot moment in time. Often, even when
13 adjusted for costs of issuance, earnings/price ratios do not represent the
14 full cost of common equity as perceived in the minds of investors since the
15 price paid for the stock reflects more than the latest actual earnings per
16 share, i.e. an anticipated higher level of earnings. Thus, such an imbalance
17 in the relationship between actual reported earnings and the price of the stock
18 results in an understatement of the cost rate for common equity. This is es-
19 pecially true when the dividend yield on market price is lower than a yield
20 available from a secured bond in the same, or similar, company. Under such
21 a circumstance, it is obvious that the common stock investor expects future
22 growth. Otherwise there would be negative compensation despite the risk of

1 being unsecured and last in line in claim on assets and earnings.

2 Q. In view of the foregoing, is it proper to assume that investors place
3 high value on the growth rate of an enterprise?

4 A. Investors look for a total expected return. While the investment cri-
5 teria of individual investors vary, all investors collectively react
6 in a certain fashion. If a high growth rate is anticipated, they will
7 accept more readily a lower current dividend yield. Conversely, if an
8 inadequate growth rate is anticipated, a higher current dividend yield
9 will be demanded, as was the case in 1975 and currently for many utilities.
10 It is for this reason that a mechanical, or strictly mathematical, ap-
11 proach to a discounted cash flow analysis should be avoided. A mechanical
12 approach often leads to an indicated total return which is ludicrous when
13 either the dividend yield or growth rate used in the computation is not
14 indicative of the future. And it is the future when investors are buying
15 - not yesterday or today.

1 Q. Will you now please describe the data shown on Schedule 6?

2 A. There are no companies that I know of which are exact replicas of Kentucky
3 Power Company. For this reason, I begin my analysis by utilizing a barometer
4 group which can be said to be nationally recognized, namely, the Moody's 24
5 Public Utilities.

6 Page 1 of Schedule 6 portrays financial data for Moody's 24 Public
7 Utilities for the five-year period 1975 thru 1979. The names of the com-
8 panies in the group are shown on page 2 and their Moody's bond ratings by
9 year are shown on page 3 of Schedule 6. At the top of page 1, it can be
10 seen that the average amount of investor-provided capital increased by
11 about 40% to \$2.887 billion in 1979, based on total capital employed.

12 During the period, the earnings/book ratio ranged between 10.9% and
13 11.5% and averaged 11.3% for the five years. With an average earnings/
14 book ratio of only 11.3%, there was a five-year average market/book ratio
15 of 88.2%. Those earnings/book ratios were experienced relative to an
16 average common equity ratio of 34.7% when short-term debt is included in
17 the capital structure. The unadjusted earnings/price ratios ranged be-
18 tween 11.8% and 14.7% during the five-year period and averaged 13.2%.
19 Those earnings/price ratios are without regard to investors' expectation
20 of future growth in earnings per share and any allowance in recognition
21 of the costs of issuance.

22 It is also seen that the average spread between the earnings/book
23 ratios and the composite long-term debt cost rate was 4.2% during the
24 period. With a prospective composite long-term debt cost of 8.91%, an
25 achieved 13.11% return on book common equity is indicated (8.91% +
26 4.2%). Theoretically, such a rate would not result in market value

1 equal to book value since the five-year average market/book ratio was
2 only 88.2%.

3 Coverage of all interest charges before income taxes excluding AFC
4 averaged 2.5 times for the group and was also 2.8 times when AFC is in-
5 cluded. After-income tax coverages of all interest charges including and
6 excluding AFC respectively were 2.3 and 1.9 times. Had the integrity of
7 the stocks not been violated by market values consistently below book value
8 year after year, those coverages would have been higher.

9 From a quality of earnings viewpoint, observe that the five-year
10 average percentage of net income available for common equity represented by
11 AFC was 36.9%, while the effective income tax rate was 28.2% and 47.7% of
12 construction requirements were generated internally.

13 Q. Is the quality of earnings also important to investors?

14 A. Yes. Investors have become very aware of the importance of the quality
15 of earnings and cash flow in recent years. They have observed that divi-
16 dends and other expenses can be paid only from cash earnings, i.e. those
17 derived from revenues. They are also concerned with companies which re-
18 quire a larger than normal percentage of external cash in order to meet
19 their obligations. Accordingly, when non-cash earnings such as those
20 from AFC (Allowance for Funds Used During Construction) become a sig-
21 nificant part of total earnings, investors demand greater premiums for
22 risk.

23 In addition, investors have become aware of the importance of a high
24 effective income tax rate and place more value on higher rather than lower
25 effective income tax rates. Investors recognize that an inferior quality
26 of earnings contributes to the downgrading of rated securities or a decline

1 in the equivalent financial profile for companies with unrated securities.
2 A downgrading or decline in equivalent financial profile has an adverse
3 effect on the financial integrity of existing investors.

4 Q. Can you demonstrate the importance of a company possessing a relatively
5 high effective income tax rate?

6 A. As I stated previously, the effective income tax rate affects the quality
7 of earnings, and, hence, the cost of capital. As can be seen on Schedule
8 7, in a hypothetical example, a similar increase in expenses between two
9 otherwise identical companies results in a much greater decline in income
10 available for common equity of Company B which has the lower effective
11 income tax rate. This volatility also results in more significant de-
12 clines in interest coverage before income taxes. While Company B's
13 interest coverages before income taxes, before the increase in expenses,
14 was not as competitive or attractive to investors as A's, after the im-
15 pact it declined to a totally inferior and unsaleable level. This demon-
16 strates why fully normalized companies (higher effective income tax
17 rates) have lower capital costs than flow-thru companies (lower effective
18 income tax rates). It is my opinion that a fully normalized company's
19 overall cost of capital may be as much as 50 basis points less than that
20 of a flow-thru company over the long run after the investing community
21 has had a chance to review actual results on a sustained basis. The
22 Federal Energy Administration in a Report to Congress concluded similarly
23 that "...It would appear that the overall cost of capital for a normalized
24 company is at least .25 to .50 percentage points lower than for a flow-
25 thru company" (source: Electrical Week, January 31, 1977).

1 Q. Please explain Schedule 8.

2 A. Schedule 8 contains five-year financial data for the seven barometer oper-
3 ating electric companies for the period 1975-79, inclusive. Their identity
4 and basis of selection are shown on page 2 of Schedule 8. At the top of
5 page 1, it is seen that total investor-provided capital increased 54.6%
6 during the period 1975-79 to about \$686 million in 1979. This indicates
7 that the average company was 1.94 times the size of the Company based on
8 total capital employed. The average capital structure ratios based on
9 total capital employed were 54.5% debt, 12.5% preferred stock and 33.0%
10 common equity capital.

11 The average market/book ratio was 91.1% and ranged between 82.3% and
12 100.9%. The average earnings/book ratio was 11.4%. Unadjusted earnings/price
13 ratios ranged between 10.9% and 14.8% and averaged 12.9% during the five-year
14 period. Once again, it is important to remember that the earnings in the earn-
15 ings/price ratio data does not reflect investor anticipation of future earning
16 growth nor does the price reflect the costs of issuance. As with Moody's 24
17 barometer group, the market price dividend yield averaged less than the average
18 yield available from purchase of bonds in the same, or similar, A-rated com-
19 panies during the five-year period. That clearly indicates investors' expecta-
20 tion of growth in earnings and dividends. If the earnings growth expected was
21 equivalent to the 5.3% projected by Value Line for this group, or the five-
22 year historical 4.0% (Schedule 13), an earnings/price ratio, taking growth
23 into account, would be in the 14.0% - 14.2% area utilizing the mid-point of
24 the unadjusted earnings/price ratios (i.e. between the 1979 and five-year
25 average) $(14.1\% + 12.9\% = 27.0\% \div 2 = 13.5 \times 1.053 = 14.2\%$ or $13.5 \times 1.04 =$
26 $14.0\%)$ before any adjustment for issuance costs. The average achieved

1 spread between earnings/book ratios and the composite long-term debt cost
2 rate was 4.5%. Since the average market/book ratio was 91.1%, it may be
3 assumed that a spread of 4.5% would result in a market/book ratio of only
4 91.1%. If the 4.5% spread were only 91.1% of the spread necessary to result
5 in a market/book ratio of 100% then a spread of 4.9% was necessary and there
6 was a need for an achieved rate on book common equity for the Company of
7 about 13.8% with a prospective long-term debt cost rate of 8.91% (8.91% + 4.9%

8 The average achieved coverage of interest charges before income taxes
9 during the five years was 2.6 times including AFC and 2.3 times excluding AFC,
10 while the after tax coverages were 2.2 and 1.8 times, respectively.

11 From a quality of earnings standpoint, it is seen that the five-year
12 averages were as follows: percentage net to common represented by AFC 39.6%;
13 effective income tax rate 25.5%; and only 34.8% of gross construction
14 generated internally.

15 Q. Since the Company is a wholly-owned subsidiary of American Electric Power
16 Company (AEP), have you studied the cost of common equity to AEP?

17 A. Yes. However, I must emphasize that such data must be reviewed with caution.
18 AEP is comprised of a number of operating electric utilities and other
19 subsidiaries. Several of the electric subsidiaries have bonds rated Baa;
20 several others have debt which is unrated; and the Company has A-rated bonds.
21 Operations are in a number of different regulatory climates. There is no
22 justification whereby one can rationally conclude that the common equity invest-
23 ment in Kentucky Power Company is automatically similar to the risk of common
24 equity investment in AEP as a whole because of the balancing effect on risk
25 of various size companies operating in different jurisdictions, etc. It must
26 be remembered that the fair rate of return allowed is applied to a property
27 rate base. Thus, it is the risk of common stock investment in Kentucky Power

1 rate base (property) which is to be determined. That risk does not (by
2 common sense) change depending upon the name on a stock certificate. With
3 that caveat in mind, I have made an analysis of AEP on a consolidated basis
4 for the period 1975-1979, inclusive, as shown on Schedule 9.

5 Q. Please explain Schedule 9.

6 A. Schedule 9 is a summary of the historical financial performance of the
7 system for the five calendar years ended 1979. Data shown is based on as
8 reported figures in each year. AEP stock is actively traded and it is on
9 those data that investor decisions were made. Furthermore, there is no way
10 to apportion the harmful effects on the market price of AEP stock caused by
11 revenue refund orders.

12 It is seen that the total capital employed increased by about 34% during
13 the period and that the fixed capital cost rates also increased during the
14 same time. The market/book ratio ranged between 86.6% and 114.6%. Adjusted
15 earnings/price ratios ranged between 9.9% and 13.7% and averaged 11.3% during
16 the five-year period. The dividend/market price yield ranged between 8.5%
17 and 11.0% and averaged 9.7% during the period. The average capital structure
18 ratios employed consisted of 59.0% debt and 41.0% total equity capital based
19 on total capital employed. The average achieved earnings/book ratio was 11.5%
20 and the average achieved spread of earnings/book ratio of the embedded cost
21 of long-term debt was 3.7% and the average market/book ratio was about 102%.
22 The average coverage of interest charges during the period was only 2.1 times
23 before and 1.9 times after income taxes including AFC confirming the low five-
24 year average effective income tax rate of 15.6% on a consolidated basis.

25 Q. Have you prepared an analysis of sales of new common stock since 1975 by companies
26 in the seven operating electric company barometer group?

1 A. Yes, and the analysis is shown on Schedule 10 which consists of two pages.
2 I have shown the results of 24 new common stock sales by the seven companies
3 in the group between January 1, 1975 and March 31, 1980. As can be seen the
4 earnings/net proceeds ratios ranged between 9.81% and 20.68%. They averaged
5 12.69% for the 24 issues for the entire period and 13.11% for 11 issues during
6 the period 1978 thru March 1980. However, the average net proceeds per share
7 was less than book value for both periods of time. As can be seen at the
8 bottom of page 2, if the average net proceeds equalled book value, the in-
9 dicated earnings/net proceeds ratios would be 13.54% for the entire period and
10 13.07% for the latter period, namely 1978 thru March 1980. I believe this
11 latter period is the more meaningful period because it is more representative
12 on average of the likely economic conditions in the near-term future than is
13 the average for 5 1/4 years. As can be seen, the average yields on offering
14 price were not sufficiently high vis-a-vis alternative bond yields as to offer
15 investors adequate compensation for being a last-in-line in claim on assets and
16 earnings. Consequently, it is clear that future growth in earnings is anti-
17 cipated. In fact, observation of the trend for earnings per share for those
18 companies which had several or more offerings during the period such as El
19 Paso Electric and Interstate Power, reveals growth in earnings per share. In-
20 deed, Value Line projects an average growth rate in the near future in earn-
21 ings per share for this group of 3.3%. If the more current period is used
22 (1978-80), the indicated earnings/net proceeds ratio which reflects such
23 growth, and which would result in net proceeds equal to book value is 13.87%
24 (13.07 x 1.05).

25 Q. Have you prepared a comparative summary of quality of earnings factors?

26 A. Yes. It is shown on Schedule 11. On this Schedule I have summarized the

principal quality of earnings considerations taken into account by investors. The data are derived from Schedules 3, 6, 8, and 9. Generally during the period, and also for the five-year average 1975-79 inclusive, Kentucky Power Company had a quality of earnings somewhat more favorable than that of the barometer companies or AEP on a consolidated basis. However, the trend for Kentucky Power, in view of its large construction program requirements, has been a rapidly increasing percentage of net income represented by AFC and a rapid decline in the percentage of gross construction costs generated internally. Thus, prospectively, the quality of earnings for Kentucky Power is quite similar to that of the barometer groups of operating electric utilities.

Q. Have you also reviewed recent 1980 market data for the barometer companies and AEP for an indication of common equity cost rate?

A. Yes. The data are set forth on Schedule 12. For the reasons previously stated, AEP results are not a valid indicator of the risk rate to which the common equity portion of Kentucky Power's property rate base is exposed. Common sense mandates that if the stock were sold to me tomorrow, the risk of that property would not change with the name on the stock certificate. Thus, AEP data is shown only for information purposes.

I utilized market prices of the various stocks as of July 23, 1980, and the latest earnings and indicated annual dividends per share. As can be seen, the unadjusted earnings/price ratios averaged 13.3% for the Moody's 24 and 14.1% for the seven barometer companies. Neither group had a dividend yield equal to or greater than new bond yields of the same, or similar companies. Therefore, it is clear investors expect future earnings growth. Value line, in its projections, affirms prospective growth in earnings. Also, the footnotes confirm that tremendous rate activity is, or will be, underway. Utilizing

1 Value line's projected growth rates in earnings per share (Schedule 13).
2 It is seen that the resultant ~~und~~adjusted (for issuance costs), earnings/price
3 ratios are as follows: Moody's 26 14.6%, and the seven barometer companies
4 14.8%.

5 Q. Did you also perform a discounted cash flow analysis as a means to determine
6 a common equity cost rate?

7 A. Yes. The theory of discounted cash flow analysis (DCF) is not a new
8 one. It had been used for many years in industry in evaluating the viability
9 of capital projects, etc. It is also known as the present value method.

10 Very simply, it means finding the present value of an expected future
11 stream of net cash flows during the investment period discounted at the
12 cost of capital (capitalization rate). In short, the DCF application for
13 determining the capitalization rate for common equity capital is that an
14 investor buys a stock for an expected total return which is to be derived
15 from cash flows in the form of dividends and appreciation in market price.
16 Thus, the dividend yield on market price plus a growth rate equals the
17 capitalization rate ($D/P + G$).

18 The capitalization rate is the return rate expected by investors and
19 may be realized only if the utility actually achieves such a rate on its
20 common equity and the stock sells at book value.

21 The DCF principle, while it appears to be mathematically precise, has
22 certain constraints inherent in its application to determine the cost of
23 common equity. Its application implicitly assumes a constant dividend
24 payout ratio and that the stock will be sold at the same price/earnings
25 multiple upon which it was purchased. Some who use DCF in a rate proceeding

26 such as this, assume that investors will hold the stock in perpetuity. Such
27 an assumption is invalid. Further, what is important is that the cost

1 rate for common equity capital changes from time to time. An estimate of
2 its cost must not reflect perpetuity but rather the likely time span between
3 rate adjustments when the cost rate is reviewed and adjusted as may then
4 be required. Consequently, the DCF theory and rate making are prospective.
5 On Schedule 13, I have shown the results of my analysis which is faithful
6 to the DCF and rate making principles.

7 Q. Please explain Schedule 13.

8 A. On Schedule 13, I have shown yield and growth data taken from recent Value
9 Line Investment Survey reports. Value Line probably has the largest cir-
10 culation of any investment service in the country. It is safe to say that all
11 investors do not utilize Value Line's forecasts carte blanche. Nevertheless,
12 Value Line's forecasts are probably representative of the average or cross
13 section of the market as a whole. Since the concept of DCF is prospective, as
14 is rate making, current yields are more appropriate for use than average
15 historical yields. Consequently, investors' assessment of future growth is
16 of paramount importance. That assessment is unrelated to historical growth in
17 earnings, especially when such historical growth rates were derived from a
18 period with an average rate of inflation of perhaps only one-half that being
19 experienced currently or which may reasonably be expected and resulted in
20 market/book ratios less than 100%.

21 As can be seen, the total return rate requirements based on the barometer
22 operating electric company groups range from a low of 15.4%, using most con-
23 servatively the historical growth rate in earnings or dividends, to a high
24 of 16.7% using a prospective growth rate. The most meaningful group is the
25 seven barometer companies since they are more similar to Kentucky Power. Pages
26 2 thru 9 contain the particulars of the historical growth rate computations.

1 have no precise way of knowing exactly which time period investors might
2 rely upon, I have averaged all the periods to get a 4.0% average. However,
3 one company in the group of seven, namely Kansas Gas & Electric had an 11.2%
4 negative growth rate. This is not realistic as being representative of the
5 future, especially since Value Line projects growth for that company. If
6 historically a nil rate were used, in lieu of a negative rate, the average
7 growth rate for the group in earnings per share would be 5.6% and the total
8 cost rate would be 17.0% (11.4% + 5.6%). Of course, none of these rates
9 has been adjusted to reflect the costs of issuance as indicated in Note 1.

10 Q. Have you also employed the bare rent theory to measure the cost of common
11 equity capital for Kentucky Power Company?

12 A. Yes. My analysis leads me to the conclusion that the bare rent or pure
13 interest rate without regard to inflation is about 2.5%. My analysis is set
14 forth on page 1 of Schedule 14. In effect, high quality bonds such as utility
15 bonds rated Aa yield on average over time a rate equivalent to inflationary
16 expectations and the bare rent rate. Companies such as Kentucky Power which
17 have lower rated bonds need to pay an additional premium because of a higher
18 risk associated with a lower rating. Finally, to arrive at the cost for
19 common equity capital, there must be added an equity risk premium which takes
20 into account the added risk borne by a common stockholder. An equity risk
21 premium is necessary because a common stockholder bears the risk of attrition
22 and stands last in line in claim on assets and earnings.

23 On page 2 of Schedule 14, I have summarized my bare rent rate conclusion.
24 Kentucky Power bonds are rated A. My analysis indicates that a realistic
25 estimate of the average rate of inflation thru 1981 is 11%. With a conserva-
26 tive estimate of equity risk premium of 4% (see Schedule 15), a 17.7% common

1 equity cost rate is indicated.

2 Q. Have you also made an analysis of the indicated cost rate for common equity
3 capital thru the use of the capital asset pricing model (CAPM)?

4 A. Yes, I have.

5 Q. Will you briefly discuss the CAPM theory?

6 A. The CAPM theory states that the expected rate of return is equal to a
7 riskless rate of return plus a risk premium which is proportional to the
8 systematic risk of a security. A riskless rate of return is most often
9 equated to returns on U.S. Government securities such as U.S. Treasury Bills
10 or 3 year Treasury Notes. The treasury bills tend to be more volatile than
11 the 3 year notes. Consequently, I believe that the 3 year notes are a better
12 and more stable indicator of a prospective riskless rate of return. The sys-
13 tematic risk of a security is the risk which cannot be reduced by diversifi-
14 cation. It is related to general price movements in the security market not di-
15 rectly attributable to a specific company or security. The beta coefficient is a
16 measure of systematic risk. A beta of 1.0 would indicate that the systematic
17 risk of a specific security is equal to that of the market as a whole while
18 betas of more or less than 1.0 would indicate greater or lesser systematic
19 risk respectively. Most utilities are found to have less systematic risk than
20 the market as a whole.

21 The CAPM does not measure unsystematic risk or that which can be
22 diversified. Unsystematic risk represents essentially all business risks and
23 financial risk. Such risks are quite important to investors and represent
24 a much greater percentage of the total investment risk than does the systematic
25 risk. Therefore, the CAPM is appropriate to utilize in establishing a
26 diversified portfolio whereby systematic risk is, hopefully, minimized. CAPM
27 is not ideally suited for determining the cost rate for common equity capital.

1 of a single enterprise because it does not consider diversifiable, unsystematic
2 risk which is substantial. Nevertheless, I have made a CAPM analysis which is
3 set forth on Schedule 15.

4 Q. Please explain Schedule 15.

5 A. Three distinct elements are needed to apply CAPM theory viz. a riskless
6 rate of return, a beta coefficient and a market premium. All three are set
7 forth in this Schedule. I reviewed yields on 91 day U.S. Treasury bills and
8 3 year treasury notes and believe the 3 year notes are the more indicative
9 indicator of a riskless rate of return for the reason previously mentioned.
10 I have shown such rates by month for the years 1975 thru 1980 and by month
11 between June 1979 and June 1980. Based on the trend of those rates and a
12 realistic assessment of near-term inflation, I believe a representative average
13 riskless rate is 7.5% at least thru 1981. It has already been much higher
14 and will no doubt fluctuate and at times be lower. In other words, 9.5% is
15 my judgment of a reasonable average thru calendar 1981.

16 For beta coefficient, I have chosen to utilize the most recent for AEP and
17 the average of each barometer group as computed and published by Value Line
18 Investment Survey. As is seen, it is 0.65 for AEP and Moody's 24 Utilities and
19 0.59 for the seven barometer electric companies. For an equity risk premium, I
20 used the arithmetic average results of a study of historical returns covering
21 the period 1925-78 of 8.7% - see Note 2 on page 1.

22 As can be seen, application of the CAPM theory results in common equity
23 cost rates of 15.2% for AEP and the Moody's 24 and 14.6% for the seven barometer
24 companies. Those rates are without regard to reflecting any of the costs of
25 issuance.

1 Q. Does that conclude your analysis of market-oriented techniques?

2 A. Yes. As indicated previously, I will also perform a comparable earnings
3 analysis and then test my conclusion by an analysis of indicated coverages
4 of fixed charges.

5 Q. Throughout your testimony you have made reference to various cost rates
6 before any adjustment for the costs of issuing new common stock. Have you
7 performed a study to determine the magnitude of such costs?

8 A. Yes, and it is set forth in Appendix B to my direct testimony. Appendix B
9 is, I believe, self-explanatory. It contains an analysis of the costs of
10 issuing new common stock including market pressure. In order to compete
11 successfully for capital, Kentucky Power Company must have an adequate return
12 rate on common equity capital. There is a correlation between common equity
13 return rates and coverage levels of fixed charges. It is circular reasoning to
14 not allow such costs. In Appendix B, I show my analysis of such costs for
15 AEP as well as a Kidder Peabody & Co. analysis. I also show an analysis,
16 without regard to market pressure, for the 24 issues by the seven barometer com-
17 panies between January 1975 and March 1980 and that analysis indicates average
18 issuance costs of 4.4%. My market pressure study for AEP indicates that those
19 costs would likely increase to at least 7% when market pressure is considered.
20 Consequently, as indicated on page 3 of Appendix B, a conservative measure
21 of such costs as a percentage of offering price is 7.0%. Therefore, where
22 appropriate, an unadjusted cost rate will represent 93% of the indicated
23 cost rate after recognition of the costs of issuance.

24 Such costs must be recognized or there will be an increase in the
25 cost rate for fixed capital. And, if fixed capital costs more, so does common
26 equity capital which can result in a greater cost to consumers over the long

1 run.

2 Q. In performing your analyses, including the analysis of issuance expenses,
3 have you assumed that your conclusion of common equity cost rate would
4 result in a specific market/book ratio?

5 A. No. The Kidder, Peabody & Co. study set forth on page 10 of Appendix B
6 indicates that utilities' common stocks should have a market price which
7 exceeds book value by up to approximately 20% in order to avoid dilution
8 when issuing new stock during periods of market decline. Utilities have an
9 obligation to serve which means that they must have the ability to attract
10 all the external capital required when needed - not only during ideal market
11 conditions. Thus, an opportunity to earn a rate of return on common equity
12 should be high enough to result in a market price sufficiently above book
13 value as to avoid dilution in earnings and book value per share when it is
14 necessary to sell new common stock. However, in actuality, such has not
15 been the case for many utilities for quite some time.

16 In the final analysis, the market/book ratio is the end result of
17 regulatory decisions. If cognizant regulatory agencies permit opportunities
18 for unrealistically low return rates on common equity capital, they assure
19 that the integrity of the investment of existing common shareholders will be
20 violated when new stock is required to be sold at discounts from book value.

21 Q. What are the results of your comparable earnings analysis?

22 A. My comparable earnings analysis is set forth in Schedule 16, which consists
23 of 7 pages. I conclude that a comparable earnings achieved rate which avoids
24 circular reasoning is 13.6% as summarized on page 1. It is relative to
25 an approximate common equity ratio of 43% computed without regard to job
26 development credits. Obviously, when attrition and regulatory lag are
27 considered, a much higher opportunity rate (before attrition and lag) is

1 required. Therefore, I believe that my conclusion of a 14.5% opportunity
2 common equity cost rate is conservatively proper.

3 Since regulation is a substitute for the competition of the market-
4 place, it is necessary to begin such an analysis by utilizing the results
5 of unregulated enterprises operating freely in the marketplace. An ex-
6 cellent broad-based indicator of unregulated enterprises is the Standard &
7 Poor's 400 Industrials. To utilize the comparable earnings of other
8 utilities without regard to the marketplace is the height of circular
9 reasoning. The cost rate is established by investors and is determined by
10 their alternative investment opportunities. It is not what utilities
11 actually achieve, especially when investors' assessment of such earnings
12 rates results in market prices discounted to below book value.

13 I begin my analysis with before-income tax overall rates of return
14 for the S&P 400 Group for the most recent eight years available. I believe
15 eight years is a long enough period of time to encompass a typical, complete
16 business cycle. Use of before-income tax data eliminates the need to
17 analyze differences attributable to financial risk. Therefore, the principal
18 objective is to arrive at an informed judgment of the level of business
19 risk for Kentucky Power and similar risk electric utilities vis-a-vis the
20 S&P 400 Group.

21 The purpose of the data shown on pages 3 and 4 for the Moody's 24 is to
22 determine the degree of change in after-income tax common equity cost rate
23 caused by a change in common equity ratio. The result is important to an
24 ultimate determination of business risk differential. As can be seen, I
25 calculated that an average percentage point change in common equity ratio
26 brings about an approximate 0.2% inverse change in common equity cost rate.

27 The purpose of the data on page 2 is to ascertain relative business

1 risk between the Moody's 24 and the S&P 400 Group. For the eight years
2 ending 1979, their business risk is indicated to be 28% less (72%) on
3 average than that of the S&P 400 Group. Investors assess risk differentials
4 and that risk is reflected in the price paid for securities. The price paid
5 reflects assessment of all risk both business and financial. However,
6 utilizing before-income tax overall rates of return as the starting point
7 removes the need for further analysis of financial risk because interest on
8 debt is deductible in arriving at taxable income which reduces income taxes.
9 In effect, a before-income tax overall rate of return is the same, all other
10 things being equal, regardless of the capital structure ratios of a company.

11 The data on pages 5 through 7 relate to the seven barometer electric
12 companies and are similar to the data on pages 2 through 4. As can be seen
13 on page 5, the eight-year average relative business risk vis-a-vis the S&P
14 400 is 71%. After a review of this historical data, and in consideration of
15 the current and prospective plight of the electric utility industry, it is my
16 judgment that a prospective assessment of business risk is 75% of that of the
17 S&P 400 Industrials. In other words, I believe the prospective business risk
18 of Kentucky Power is 25% less than that of the S&P Industrials on average.
19 However, when a comparative analysis is made on an after-income tax basis,
20 it appears that the combined business and financial risk of utilities must
21 be much closer to, if not exceed, that of the S&P 400.

22 Q. Please explain.

23 A. As can be seen on Schedule 17, during the eight years ending 1979 as well
24 as early 1980 public utilities have been paying more for their long-term
25 debt capital than have similarly rated industrials. Of course, there is no
26 way to ascertain with certainty whether or to what degree a spread would
27 exist if both groups had similar debt ratios. I concluded in my comparable

1 earnings analysis that the Company prospectively has about 25% less business
2 risk than the S&P Industrials. It does not appear that the lower business
3 risk of electric utilities offsets the greater level of financial risk
4 employed. One thing is certain, however, and that is that as debt costs more
5 so does equity. It can be seen that during periods of high interest rates
6 and tight money such as 1975 and early 1980 the spread increases which means
7 that capital becomes more costly than usual for the utilities versus the
8 industrials.

9 Also, it can be seen that lower rated utilities pay more for their
10 debt capital than those with higher ratings. During tight money, high interest
11 rate periods, the lower rated utilities pay even more on a relative basis.
12 During the period 1972-79, A-rated utility bonds averaged 0.30% more than
13 Aa-rated utility bonds. Even when the extraordinary year 1975 is eliminated,
14 the average spread during the period was still 0.24%.

15 Q. What is your conclusion as to a common equity cost rate?

16 A. On Schedule 1, I summarized my conclusion as to the cost rate of common capital.
17 My conclusion as to the common equity cost rate is 14 1/2% relative to a common
18 equity ratio of about 43% (without regard to the unamortized job development
19 investment tax credits). If my conclusions were based strictly upon condi-
20 tions as they existed at March 31, 1980, my cost rate would have been con-
21 siderably higher than 14 1/2%.

22 Q. Why?

23 A. Rate making is, and must be, prospective. New rates are set to be collected
24 over a period of time in the future. The typical period of time between
25 rate cases for most utilities, in these times of high inflation and interest
26 rates, and rate base growth, seems to be between one and two years. My

1 conclusion of common equity cost rate reflects a decline in interest rates
2 and in the cost rate for common equity.

3 As can be seen on Schedule 18, I have summarized the various indicated
4 measures of the cost rate for common equity capital before and after a 7%
5 adjustment in recognition of the costs of issuing new common stock.

6 As can be seen on Schedule 18, a prospective cost rate of 14 1/2% is
7 conservatively realistic. It is supported as conservative by all the
8 techniques employed, particularly when data for only the independent oper-
9 ating barometer companies is considered. AEP consolidated data is no useful
10 guide and investors clearly look to each operating electric utility subsidiary.
11 If they did not, all the subsidiaries would have similar bond ratings and
12 they do not.

13 Q. Does your conclusion of a 14 1/2% cost rate for common equity capital include
14 any provision for attrition and regulatory lag?

15 A. My conclusion does not contain any separate provision or allowance for
16 attrition or regulatory lag. My conclusion is derived from analyses of market
17 data established thru investors' transactions. Investors are keenly aware
18 that these elements exist for public utilities - although perhaps to a greater
19 extent for some utilities than for others. Consequently, the prices paid
20 by investors reflect their average assessment of the impact of those elements.
21 Thus, it is not necessary to establish a separate, and additional, cost rate
22 factor in recognition of those elements - and I have not done so in this
23 instance. In some instances, however, it may be appropriate to make an addi-
24 tional provision in recognition thereof when it is obvious that the pro-
25 spective annual rate of attrition will far exceed that which may reasonably be
26 expected by investors.

1 Q. What coverage ratios and return rate on common equity are likely to be
2 experienced if an overall rate of return of 11.37% is allowed?
3 A. The likely experienced results are set forth on page 1 of Schedule 19. The data
4 on this Schedule is based on two assumptions, viz. that no attrition and lag will
5 occur and that those elements will occur at a rate equal to 1% of the overall
6 cost of capital. The latter premise is the more realistic as virtually no
7 utility in the past decade or the reasonably foreseeable future can hope to
8 be fully insulated from these elements. Further, Kentucky Power has been
9 experiencing substantial attrition because of its large construction program.
10 There is no reason to believe that in the next 12 to 18 months there will be
11 a significant decline in the rate of attrition because of rate base growth
12 and a decline in the ability to sell power which will increase the cost of
13 service. Consequently, the data shown under the "Assuming No Attrition"
14 column is for information purposes only.

15 Under the realistic assumption, i.e. "Assuming Attrition" column, it
16 is seen that if attrition occurs at the rate I believe is realistic, the
17 indicated achieved common equity return rate is 12.16% or much less than
18 the comparable earnings rate derived on Schedule 15 of 13.6%. As can be
19 seen, the indicated coverages of all interest charges after attrition are
20 2.9 times, before and 2.0 times after income taxes. Note that the 2.0
21 times after tax coverage of all interest is only slightly higher than those
22 of the Moody's 24 (1.9 times) and the seven barometer companies (1.8
23 times). If those two groups had achieved a high enough level of earnings
24 to result in market/book ratios in excess of 100%, their coverages would have
25 been much higher than those shown. In view of the foregoing, I believe an
26 11.37% overall rate of return is proper.

1 Q. Have you also reviewed the similar likely experienced ratios if an overall
2 rate of return of 11.35% were allowed?

3 A. Yes. Such data are shown on page 2 of Schedule 19 and differ only slightly
4 from the data discussed in detail above with regard to an 11.37% allowed
5 overall rate of return.

6 Q. Does that conclude your direct testimony?

7 A. Yes, it does.

STATE OF NEW JERSEY
County of Camden

Frank J. Hanley, upon first being duly sworn, hereby makes oath that if the foregoing questions were propounded to him at a hearing before the Energy Regulatory Commission of Kentucky, he would give the answers recorded following each of said questions and that said answers are true.


Signature

Subscribed and sworn to before me by Frank J. Hanley this 4th day of August, 1980.


Notary Public

My Commission expires: _____
(date)